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Water Supply Outlook For Idaho



SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

IDAHO SOIL CONSERVATION DISTRICTS
IDAHO DEPARTMENT OF WATER RESOURCES

AS OF
FEB. 1, 1980

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: THE SNOTEL PROJECT CENTRAL COMPUTER FACILITIES IN PORTLAND, OREGON. THE TERMINAL, PRINTER, COMPUTER AND TAPE DRIVES HAVE NOT COMPLETELY REPLACED THE SNOW SAMPLING TUBES SEEN IN THE FOREGROUND.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR IDAHO

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

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BOISE, IDAHO

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|||||
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WATER SUPPLY OUTLOOK for IDAHO



GENERAL STATEMENT FOR FEBRUARY 1, 1980

Based on February 1 snow measurements, the outlook is for fair to good water supplies during the 1980 season.

Heavy snowfall and precipitation during the month of January has brightened the outlook for an improved spring runoff. Drought conditions prevailing statewide the first of the year have been significantly diminished by greatly increased snow accumulation on most watersheds in Idaho. Though improved, well below normal runoff is still in prospect for the Weiser, Clearwater and Spokane Rivers.

February 1st snow surveys show that the water content in the snow pack ranges from a low of 62% of normal on the Weiser River drainage to a high of 117% of average on the Blackfoot and Portneuf river watersheds. Seasonal streamflow forecasts range from a low of 70% of normal for the Spokane River at Post Falls to 104% of average for Montpelier Creek in southeastern Idaho.

The soil mantle at middle and high elevations is still dry and unfrozen and is expected to absorb a considerable amount of moisture when snowmelt starts.

Reservoir storage continues to be well below average statewide and will not change appreciably until the spring runoff.

Precipitation reported by the National Weather Service averaged well above normal for January in Idaho with most of the moisture coming in the first half of the month. The precipitation averaged 142% with a range from 95% at Porthill to 309% at Pocatello. For the water year the State stands at 95% of normal. Temperature averages ranged from 2° F. in southern Idaho to nearly 5° F. below normal in northern Idaho.

If normal precipitation continues, there should be sufficient runoff to supply the water needs of Idaho for the 1980 season.

Upper Columbia River Tributaries: Snow water accumulation on the Priest River and Spokane River watersheds stand at 97% and 67% of average respectively. Near normal runoff is forecast for the Priest River at 89% of average; however the Spokane is forecast for well below normal at 70%. Coeur d'Alene Lake, though very low at 38% of average, is expected to fill.

Lower Snake River Tributaries: The snowpack on the Clearwater watershed continues to be well below normal at 64% with April-September runoff forecast to be down at 71% of average. Dworshak Reservoir storage was only 23% of capacity on February 1. Snow cover on the Salmon drainage as a whole is 96% of average. The snowpack is extremely variable with the tributaries as follows: Lemhi, Pahsimeroi and Main stem below Challis 72%; Main stem above Challis 102%; Middle and South Forks 97%; and Little Salmon 79%. April-September flow at Whitebird is forecast to be 83% of average.

Middle Snake River - Northside Tributaries: Snow cover on the Lost, Wood, Boise and Payette watersheds is 98% of normal, varying from 87% on the Little Lost to 105% on the Little Wood. The Weiser River drainage has a very deficient snowpack at 62% of average. Runoff is forecast at 80-85% on the Lost Rivers, near 90% on the Wood Rivers and 90-100% on the Payette and Boise drainages. A combination of nine reservoirs on these drainages show water storage at 83% of average on February 1. Magic reservoir is very low at only 18% of normal storage and filling will depend on how runoff occurs and necessity of early season irrigation demands.

Middle Snake River Southern Tributaries: The water content of the snow pack on the Raft River is 96% of average, 107% on the Goose, Trapper and Salmon Falls watersheds, 103% on the Bruneau and 102% on the Owyhee drainages. Seasonal runoff is forecast at 83% and 84% of normal for the Oakley Reservoir Inflow and Bruneau River respectively, 93% for Salmon Falls Creek and 94% for Lake Owyhee Inflow. Reservoir contents are 118% of average for Oakley Reservoir, 77% for Salmon Falls and 117% for Owyhee Reservoir.

Upper Snake River Basin: Snow cover in the Snake Basin above Palisades, Henry's Fork and Teton River watersheds is near 82% of average, Willow Creek drainage is at 103%, and the brightest area of the state at 117% on the Blackfoot and Portneuf Rivers. Runoff is forecast at 75% for Snake at Heise, 71% for Henry's Fork and 93% for the Portneuf at Topaz. A combination of the five reservoirs, American Falls and above, have 90% of average storage and can be expected to fill.

Great Basin: The snowpack is 116% of normal on the Upper Bear River, 110% on Montpelier Creek, 96% on Mink Creek and 102% of average on the Cub River watershed. Runoff is forecast at 91% for Bear River at Harer, 100% for Cub River and 104% for Montpelier Creek near Montpelier. Bear Lake has 95% of average stored water.

VALLEY PRECIPITATION 1/

Division Averages and Departures

In Inches

DRAINAGE DIVISIONS	Winter January 1980		Fall - Winter Oct. 1979 - Jan. 1980	
	Observed	Departure <u>2/</u>	Observed	Departure <u>2/</u>
Kootenai, Canada & U.S.	2.25	-1.23	9.19	-2.61
Flathead	3.39	+ .54	7.49	-1.72
Clark Fork	2.25	-1.23	5.05	-1.75
Pend Oreille-Spokane	3.85	- .57	11.02	-3.52
Upper Snake	3.23	+ .60	7.36	- .78
Snow River Plain	2.30	+1.07	4.75	+ .69
Salmon-Payette-Boise	3.31	+ .01	8.56	-1.09
Clearwater	3.61	-1.13	11.20	-3.68
Owyhee-Malheur	1.35	- .13	4.58	- .13

1/ Preliminary analysis and data by the National Weather Service and Meteorological Service of Canada.

2/ Departure from 15-year (1963-77) drainage division average.

COMPARISON of SNOW COVER

RIVER BASIN WATERSHED	NO. OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF :	
		LAST YEAR	1963-77 AVERAGE
<u>UPPER COLUMBIA RIVER BASIN</u>			
Kootenai River	27	167	89
Pend Oreille River	63	90	75
Upper Clark Fork River	28	68	68
Flathead River	20	102	75
Priest River	4	208	97
Spokane River	5	96	67
<u>LOWER SNAKE RIVER BASIN</u>			
Clearwater River	11	89	64
Salmon River	13	179	96
<u>MIDDLE SNAKE RIVER BASIN - Northside</u>			
Little Lost River	1-2	186	87
Big Lost River	4-5	238	100
Little Wood River	4	269	105
Big Wood River	14	228	102
Boise River	12-13	187	99
Payette River	12	181	93
Weiser River	1	118	62
<u>MIDDLE SNAKE RIVER BASIN - Southside</u>			
Raft River	1	132	96
Goose-Trapper Creek	3	111	107
Salmon Falls Creek	5	116	107
Bruneau River	3	132	103
Owyhee River	6	85	102
Jordan Creek	1	104	109
<u>UPPER SNAKE RIVER BASIN</u>			
Snake Basin - Above Palisades Res.	27	78	82
Camas-Beaver Creeks	2	91	60
Henrys Fork River	7	102	81
Teton River	8	75	82
Willow Creek	5-9	110	103
Blackfoot River	3	103	117
Portneuf River	4	119	117
<u>GREAT BASIN</u>			
Bear River - Upper	5	110	116
Bear River - Lower	14	92	109
Montpelier Creek	6	112	110
Mink Creek	1-2	93	96
Cub River	3	86	102

SNOW WATER DEPTHS

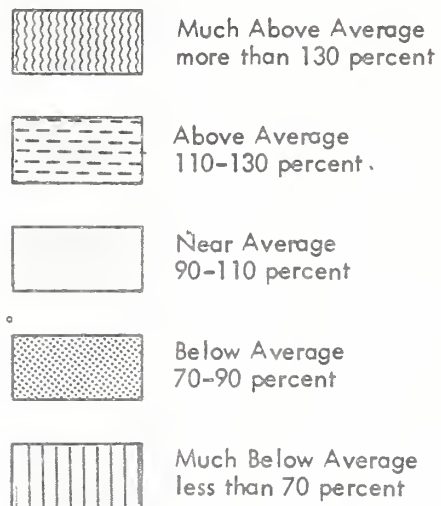
As percent of 1963-77 15 year average

FEBRUARY 1, 1980

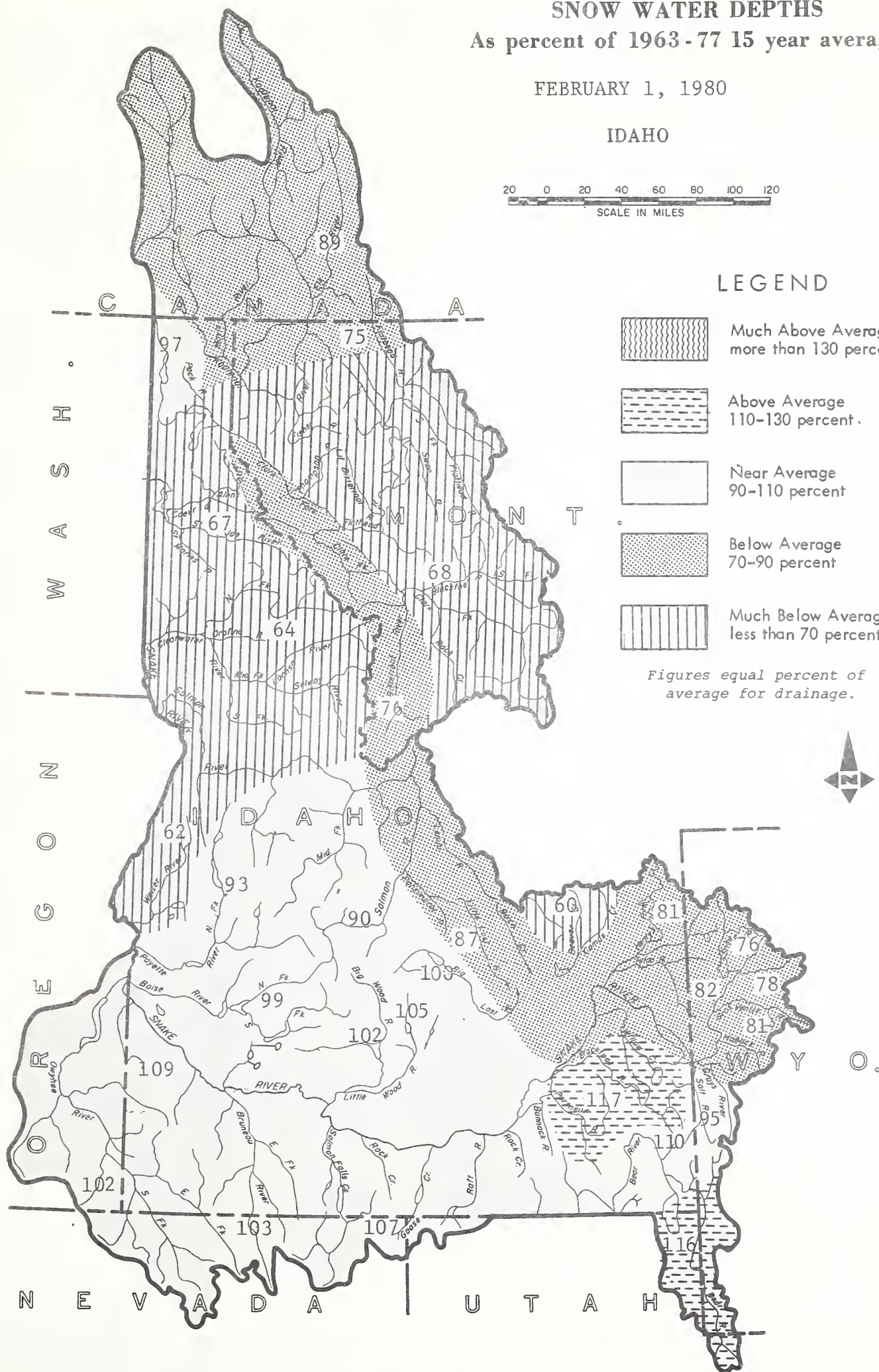
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20 0 20 40 60 80 100 120
SCALE IN MILES

LEGEND



Figures equal percent of average for drainage.



RESERVOIR STORAGE (1,000 Ac. Ft.)

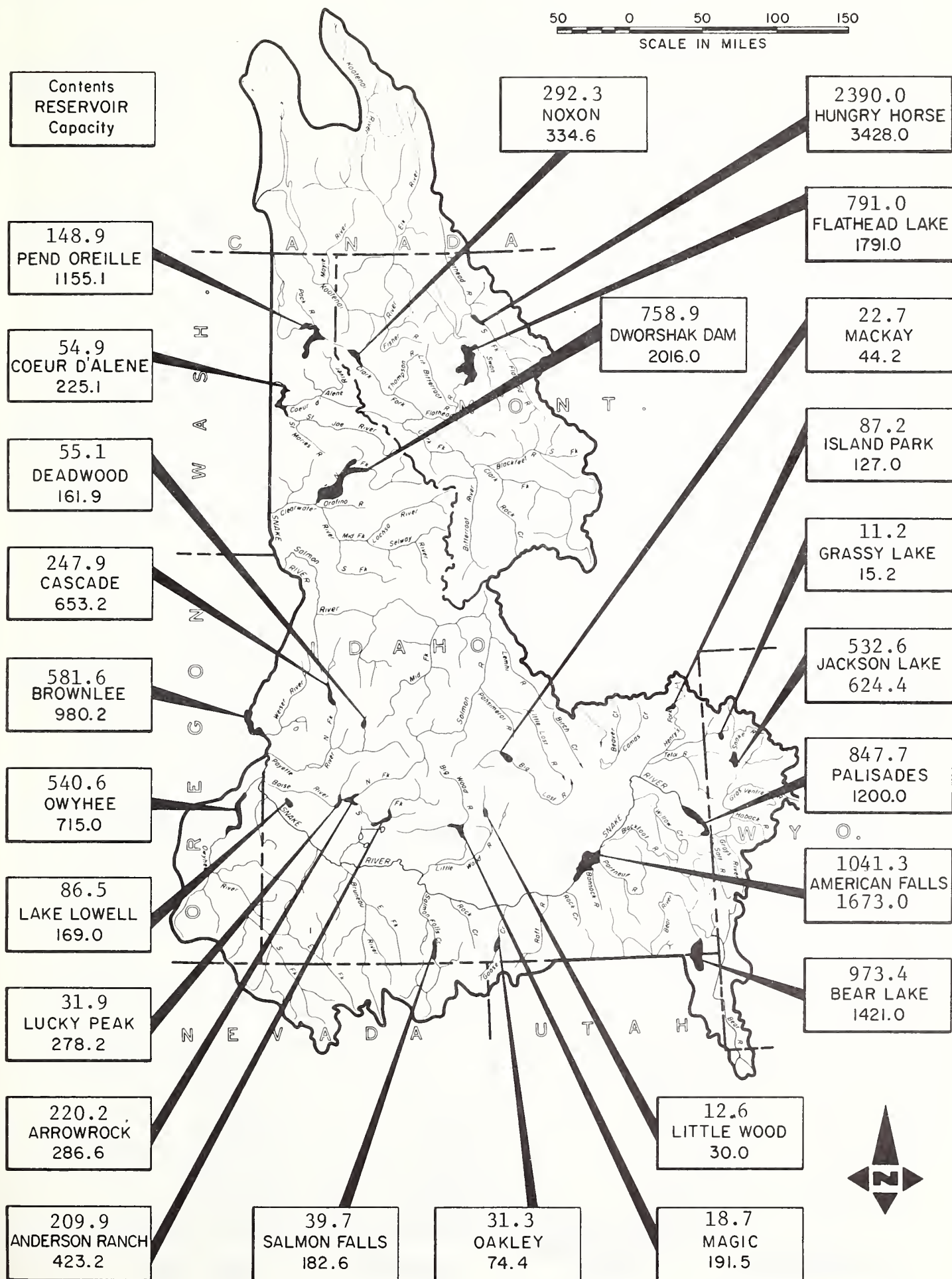
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1963-77 AVERAGE
UPPER COLUMBIA BASIN				
Clark Fork - Pend Oreille				
Hungry Horse	3428.0	2390.0	2215.0	2341.0
Flathead	1791.0	791.0	852.2	1253.3
Pend Oreille	1155.1	148.9	158.5	320.9
Noxon	334.6	292.3	286.6	315.2
Spokane				
Coeur d'Alene	225.1	54.9	13.7	145.3
SNAKE BASIN				
Snake				
Jackson Lake	624.4	532.6	570.9	612.5
Palisades	1200.0	847.7	1130.0	907.8
American Falls	1673.0	1041.3	1233.7	1151.2
Island Park	127.0	87.2	102.4	105.0
Grassy Lake	15.2	11.2	12.5	10.4
Brownlee	980.2	581.6	550.4	674.4
Goose-Trapper Creeks				
Oakley	74.4	31.3	31.3	26.4
Salmon Falls Creek				
Salmon Falls	182.6	39.7	31.4	51.6
Big Lost				
Mackay	44.2	22.7	38.0	30.3
Big Wood				
Magic	191.5	18.7	111.0	103.6
Little Wood				
Little Wood	30.0	12.6	19.7	16.1
Fish Creek				
Carey Valley	14.4	2.0	5.3	--
Boise				
Anderson Ranch	423.2	209.9	336.6	279.0
Arrowrock	286.6	220.2	227.3	254.3
Lucky Peak	278.2	31.9	66.3	85.9
Lake Lowell (Deer Flat)	169.0	86.5	129.1	122.1
Owyhee				
Owyhee	715.0	540.6	510.5	462.5
Payette				
Cascade	653.2	247.9	383.5	370.8
Deadwood	161.9	55.1	79.5	80.6
Weiser				
Mann Creek	11.1	3.5	3.4	--
Clearwater				
Dworshak	2016.0	758.9	307.5	--
GREAT BASIN				
Bear				
Bear Lake	1421.0	973.4	1300.7	1026.4

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

FEBRUARY 1, 1980

50 0 50 100 150
SCALE IN MILES

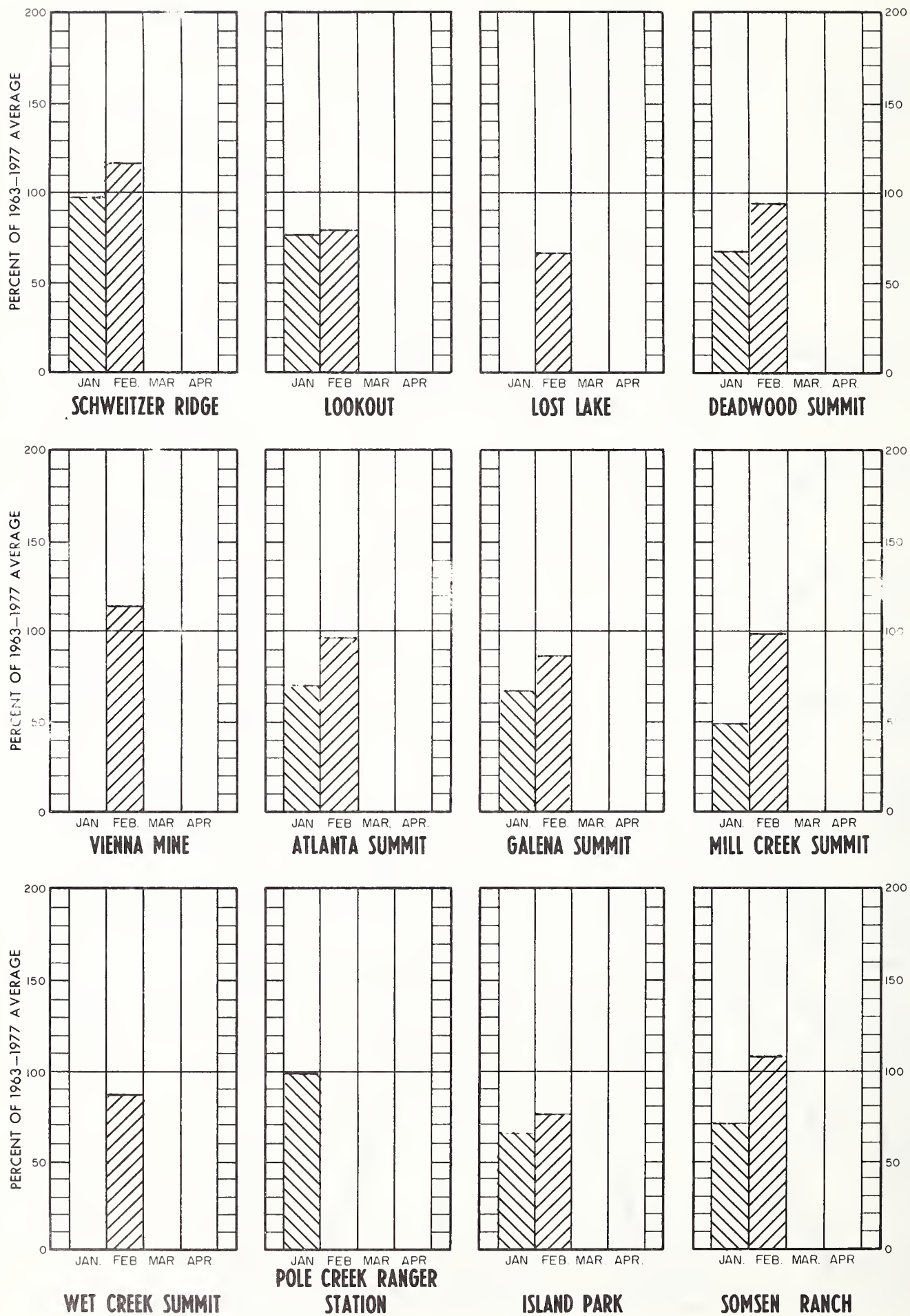


SNOW WATER DEPTHS ACCUMULATION

For Selected Snow Courses

As Compared To 1963 - 1977 15 Year Average

FEBRUARY 1, 1980



STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average [†]

UPPER COLUMBIA BASINKOOTENAI RIVER

Leonla	(at)	7550	85	Apr-Sep	8858
		6580	85	Apr-Jul	7708
		5200	85	Apr-Jun	6114

PEND OREILLE RIVERClark Fork River

Whitehorse Rapids	(at)	9820	71	Apr-Sep	-- 13781
		8920	71	Apr-Jul	-- 12519
		7550	71	Apr-Jun	-- 10633

Priest River

Priest River <u>1</u> /	(at)	750	89	Apr-Jul	-- 841
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SPOKANE RIVER

Post Falls <u>2</u> /	(at)	2050	70	Apr-Sep	-- 2910
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St. Joe River

Calder	(at)	925	71	Apr-Sep	-- 1309
		875	71	Apr-Jul	-- 1238

SNAKE RIVER BASINSNAKE RIVER - MAIN STEM

Moran <u>3</u> /	(at)	710	79	Apr-Sep	-- 903
Palisades Inflow <u>3</u> /		3100	80	Apr-Sep	-- 3863
Heise <u>4</u> /	(nr)	3200	75	Apr-Sep	-- 4247
Blackfoot <u>5</u> /	(nr)	3480	76	Apr-Jul	-- 4579

Henrys Fork

Ashton <u>6</u> /	(nr)	525	71	Apr-Sep	-- 737
Rexburg <u>7</u> /	(nr)	1090	71	Apr-Sep	-- 1534

Portneuf River

Topaz	(at)	100	93	Mar-Sep	-- 108
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Oakley Reservoir Inflow

		30	83	Mar-Sep	-- 36
--	--	----	----	---------	-------

Salmon Falls Creek

San Jacinto	(nr)	88	93	Mar-Sep	-- 95
		84	93	Mar-Jul	-- 90

Bruneau River

Hot Springs	(nr)	210	84	Mar-Sep	-- 251
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STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT		THIS YEAR			PAST RECORD	
		FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
		Thousand Acre Feet	Percent of Average		Last Year	Average [†]
<u>Little Lost River</u>						
Howe	(nr)	38	85	Apr-Sep	--	45
Wet Creek	(bl)	23	88	Apr-Jun	--	26
		35	85	Apr-Sep	--	41
<u>Big Lost River</u>						
Howell Ranch	(at)	175	79	Apr-Sep	--	225
		125	81	Apr-Jun	--	154
Mackay <u>8/</u>	(nr)	160	78	Apr-Sep	--	204
<u>Big Wood River</u>						
Magic Reservoir		285	98	Apr-Sep	--	319
Inflow <u>9/</u>		295	89	Mar-Jul	--	332
<u>Little Wood River</u>						
Carey	(nr)	97	91	Apr-Sep	--	107
		80	92	Apr-Jun	--	87
<u>Boise River</u>						
Twin Springs	(nr)	720	98	Apr-Sep	--	733
		660	98	Apr-Jul	--	676
Boise <u>10/</u>	(nr)	1620	98	Apr-Sep	--	1656
		1330	98	Apr-Jun	--	1360
		1510	98	Apr-Jul	--	1536
<u>South Fork</u>						
Anderson Dam <u>11/</u>	(at)	610	98	Apr-Sep	--	622
<u>Owyhee River</u>						
Gold Cr., Nev. <u>12/</u>	(nr)	20	85	Apr-Jul	--	23
Owyhee, Nev. <u>12/</u>	(nr)	64	80	Apr-Jul	--	80
Lake Owyhee		367	94	Apr-Sep	378	392
net inflow <u>13/</u>		554	96	Feb-Jul	637	578
<u>Payette River</u>						
Horseshoe Bend <u>14/</u>	(nr)	1700	91	Apr-Sep	--	1860
<u>North Fork</u>						
Cascade <u>15/</u>	(at)	510	90	Apr-Sep	--	564
Banks <u>15/</u>	(nr)	655	90	Apr-Sep	--	726
<u>Weiser River</u>						
Weiser	(nr)	400	72	Mar-Sep	--	558

(c) Assuming normal meteorological conditions.

1963-1977 period.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST ^c		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average [†]

<u>Salmon River</u>						
Whitebird	(at)	6000	83	Apr-Sep	--	7196

<u>Clearwater River</u>						
Spalding	(at)	6160	71	Apr-Sep	--	8672

GREAT BASIN

<u>BEAR RIVER</u>						
Harer	(at)	303	91	Apr-Sep	--	332

<u>Montpelier Creek</u>						
Montpelier	(nr)	12.9	104	Apr-Sep	--	12.4

<u>Cub River</u>						
Preston	(nr)	50	100	Apr-Sep	--	50
		47	100	Apr-Jul	--	47






Cooperative forecasts released by Soil Conservation Service and National Weather Service.

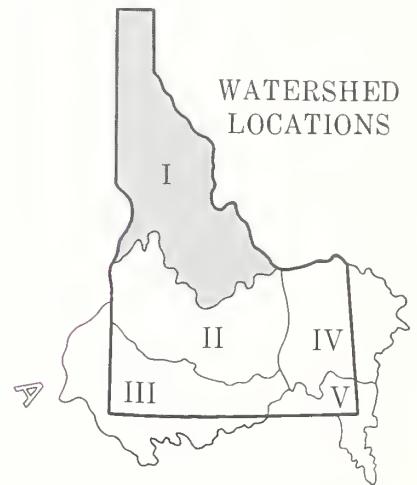
- 1/ Observed flow corrected for storage in Priest Lake.
- 2/ Observed flow corrected for storage in Coeur d'Alene Lake.
- 3/ Corrected for storage in Jackson Lake.
- 4/ Corrected for storage in Jackson Lake and Palisades.
- 5/ Corrected for storage in Jackson Lake, Palisades, Island Park, Henry's Lake, Grassy Lake and diversions between Heise and Blackfoot.
- 6/ Corrected for storage in Henry's Lake and Island Park Reservoir.
- 7/ Corrected for storage in Henry's Lake, Island Park, Grassy Lake and diversions between Ashton and Rexburg.
- 8/ Observed flow corrected for storage in Mackay Reservoir.
- 9/ Combined flow Big Wood River nr. Bellevue and Camas Creek nr. Blaine.
- 10/ Corrected for storage in Arrowrock, Anderson Ranch and Lucky Peak.
- 11/ Corrected for storage in Anderson Ranch Reservoir.
- 12/ Corrected for storage in Wild Horse Reservoir.
- 13/ From WPRS records of inflow.
- 14/ Corrected for storage in Cascade and Deadwood Reservoirs.
- 15/ Corrected for storage in Cascade Reservoir.

This is a detailed topographic map of the Snake River region in Idaho. The map shows the following features:

- Geography:** The Snake River flows through the center, with tributaries like the Priest River, Coeur d'Alene River, and Clearwater River. Other features include the SCHWEITZER BOWL, SCHWEITZER RIDGE, and various mountain ranges like the Kootenai and Benewah.
- Towns and Settlements:** Numerous towns are marked, including Priest River, Coeur d'Alene, St. Maries, Lewiston, Spalding, Anshak, Orfino, Moscow, and Whitebird.
- Roads:** Major roads are shown, including U.S. 20, U.S. 95, and U.S. 10. Local roads like Benton Sp. and Kelllogg Pk. are also indicated.
- Landmarks:** Key landmarks include the BENTON MEADOW, BENTON SPR., SAGE CREEK SADDLE, and the 4TH OF JULY SUMMIT.
- Coordinates:** The map includes latitude and longitude markings, such as 49°00' N, 117°00' W, and 116°00' W.
- Other Features:** The map also shows the BOUNDARY Banners Ferry, the MOSQUITO RIDGE, and the KELLLOGG PK. area.



- | | |
|---|--------------------------------------|
|  | Watershed Boundary |
|  | Soil Conservation District Bdry. |
|  | County Boundary |
|  | Forecast Point |
|  | Snow Course |
|  | Snow Course and Snow Pressure Pillow |
|  | Snow Pressure Pillow |
|  | Aerial Snow Depth Gage |
|  | Soil Moisture Station |
|  | Temperature Gage |
|  | Precipitation Gage |
|  | Radio Telemetry |



INDEX to SNOW COURSES

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	OR AND	LONG.	

UPPER COLUMBIA BASIN

KOOTENAI RIVER

16A7	I	Halverson Creek	3	57N	3E	4850
16A1	I	Smith Creek	29	64N	3W	4800

PEND OREILLE - PRIEST RIVER

16A8	I	Bear Mountain	9	57N	3E	5400
16A2	I	Benton Meadow	27	58N	4W	2370
16A3	I	Benton Spring	30	58N	3W	4900
16A6	I	Schweitzer Bowl	20	58N	2W	4500
16A5	I	Schweitzer Ridge	19	58N	2W	6200

HAYDEN CREEK

16B8	I	Chilco Ridge	15	52N	2W	3650
16B7	I	Conie Ridge	22	52N	2W	3900
16B9	I	Corner Creek	22	52N	2W	3150
16B6	I	Sage Creek Saddle	10	52N	2W	4100

SPOKANE RIVER

15B8SP	I	Above Burke	11	48N	5E	4100
15B7	I	Above Roland	35	47N	6E	4350
15B6	I	Below Roland	3	46N	6E	3840
16B2	I	Copper Ridge	6	50N	1W	4800
16B3M	I	Fourth of July Summit	6	49N	1W	3200
15B13A	I	Granite Peak	3	42N	8E	6000
16B5A	I	Kellogg Peak	19	48N	3E	5560
15B2MSP	I	Lookout	4	47N	6E	5120
16B1	I	Lower Sands Creek	32	51N	1W	3400
15B4ASP	I	Medicine Ridge	24	43N	10E	6160
16A4ASP	I	Mosquito Ridge	5	54N	2E	5110
15B5A	I	Roland Summit	26	47N	6E	5200
16C1SP	I	Sherwin	28	42N	1E	3200
15B9ASP	I	Sunset	33	49N	5E	5600

LOWER SNAKE BASIN

PALOUSE RIVER

16C6	I	Crumarine Creek	24	40N	5W	3340
16C3	I	East Twin	13	40N	5W	4050
16C5	I	Howard Creek	14	40N	5W	3500
16C2	I	Moscow Mountain	18	40N	4W	4400
16C4P	I	West Twin	14	40N	5W	4250

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	OR AND	LONG.	

CLEARWATER RIVER

15D5MAP	I	Buck Meadows	26	31N	8E	5650
15C3A	I	Cayuse Airstrip	4	38N	11E	3700
15C7S	I	Coolwater Mountain	32	33N	8E	6200
16C16	I	Cottonwood Butte	33	32N	1W	5140
15C9A	I	Crater Meadows	2	37N	9E	6100
14C10	I	Crooked Fork	27	37N	14E	3800
16C15A	I	Elk Butte	6	40N	3E	5550
15C2AP	I	Fish Lake Airstrip	35	35N	11E	5000
15B3ASP	I	Forty-nine Meadows	6	43N	5E	4880
14C9A	I	Goat Lake	4	38N	13E	6600
16C6AP	I	Hemlock Butte	7	36N	7E	5500
15C8S	M	Hoodoo Basin	17	14N	27W	6000
15C1	M	Hoodoo Creek	16	14N	27W	5900
14D3	I	Kit Carson Pasture	4	27N	16E	5020
14C5M	I	Lolo Pass	16	38N	15E	5240
15B14AS	I	Lost Lake	16	43N	4E	6000
16D7	I	Lower Snowhaven	9	29N	3E	5300
15D6AP	I	Mountain Meadows	9	27N	10E	6300
14D1	M	Nez Perce Pass	25	1S	24W	6575
15D4S	I	Orogrande Mountain	24	27N	6E	7800
15C5	I	Pierce Ranger Station	2	36N	5E	3170
14C6	I	Powell Ranger Station	33	37N	14E	4230
14C4	I	Savage Pass	18	36N	15E	6170
15C4A	I	Shanghai Summit	7	37N	6E	4600
16D4	I	Upper Snowhaven	8 & 9	29N	3E	5600

SALMON RIVER

13E19MA	I	Above Gilmore	13	13N	26E	8250
13E21A	I	Aspen-Hall Pass	6	16N	28E	8110
15E2	I	Big Creek Summit	24	15N	5E	6600
13E8A	I	Borah	21	10N	23E	8250
16D6	I	Brundage Mountain	6	19N	3E	7560
13E17A	I	Copes Camp	36	18N	22E	7500
13E25A	I	Double Springs Pass	3	10N	22E	8400
13D2	M	Gibbons Pass	4	2S	19W	7100
13E20A	I	Hall Creek	1	16N	27E	7560
13E24A	I	Leatherman Pass	20	9N	23E	9800
13E1	M	Lemhi Pass	9	10S	15W	7480
13E23	M	Lemhi Ridge	4	10S	15W	8100
13E18MA	I	Meadow Lake	25	13N	26E	9200
14E1MAP	I	Mill Creek Summit	8	13N	17E	8800
13D16	I	Moose Creek	14	27N	21E	6200
14E4	I	Morgan Creek	32	18N	19E	7580
13E26	I	Morse Creek Sawmill	8	15N	23E	7120
14E7	I	Redfish Lake Flat	35	10N	13E	6550
13E16A	I	Schwartz Lake	34	18N	22E	8500
14E3A	I	Twin Peaks	28	15N	17E	9170
14F4AP	I	Vienna Mine	1	5N	13E	8950
14D4	I	Williams Creek Summit	34	21N	20E	7800

LEGEND

Numbering System (example)

10J7	SNOW COURSE ONLY
10J7P	SNOW COURSE AND PRECIPITATION GAGE.
10J7M	SNOW COURSE AND SOIL MOISTURE STATION.
10J7A	SNOW COURSE AND AERIAL MARKER.
10J7s	PRESSURE PILLOW ONLY.
10J7S	SNOW COURSE AND PRESSURE PILLOW.
10J7MA	SNOW COURSE, SOIL MOISTURE STATION AND AERIAL MARKER.
10J7MP	SNOW COURSE, SOIL MOISTURE STATION AND PRECIPITATION GAGE.
10J7m	SOIL MOISTURE STATION ONLY
10J7a	AERIAL MARKER ONLY.
10J7p	STORAGE PRECIPITATION GAGE ONLY.
10J7R	RADIOACTIVE GAGE

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average /

UPPER COLUMBIA RIVER BASIN

PEND OREILLE - PRIEST RIVER

Benton Meadow	2370	1/30	17	3.9	3.2	5.5
Benton Spring	4900	1/30	36	10.9	6.2	13.9
Schweitzer Bowl	4500	1/31	53	18.5	9.5	21.8*
Schweitzer Ridge	6200	1/31	92	38.4	15.6	32.6*

SPOKANE RIVER

Above Burke	4100	1/30	37	10.4	14.2	16.4*
#Forty-nine Meadows	4840	1/29	49	12.3	12.5	--
Fourth of July Summit	3200	1/30	15	4.2	9.6	7.2
Lookout	5120	1/30	60	20.0	14.4	25.4
#Lost Lake	6080	1/29	87	25.8	19.4	39.4*
Sherwin	3200	1/30	21	5.9	11.7	10.7

LOWER SNAKE RIVER BASIN

CLEARWATER

Breezy Saddle	5000	1/29	50	13.3	13.0	--
Cayuse Airstrip	3500	1/29	25	3.5	9.6	9.7*
Crater Meadows	6100	1/29	76	21.6	20.7	31.0*
Crooked Fork	3600	1/30	24	6.1	10.1	10.4*
Fish Lake Airstrip	5650	1/29	74	21.0	20.5	28.8*
Forty-nine Meadows	4840	1/29	49	12.3	12.5	--
Hemlock Butte	5500	1/29	82	22.7	20.6	35.1*
#Hoodoo Basin	Mont. 6000	1/26	87	30.0	25.4	36.3*
#Hoodoo Creek	Mont. 5900	1/26	82	23.7	22.5	32.5*
Lolo Pass	5240	1/30	55	17.4	20.2	21.8*
Lost Lake	6080	1/29	87	25.8	19.4	39.4*
Pierce Ranger Station	3170	2/1	24	7.6	9.6	8.6
Savage Pass	6170	1/30	53	16.2	17.3	19.1*
Shanghai Summit	4600	1/29	44	10.4	14.8	17.4*

SALMON RIVER

Big Creek Summit	6600	2/2	84	27.4	13.8	26.3
#Boulder Creek	5500	1/31	39	11.1	9.4	18.0
Brundage Mountain	7560	1/29	83	29.5	14.8	32.2*
#Deadwood Summit	6750	1/29	97	32.6	14.4	34.8*
#Galena Summit	8780	1/28	57	15.3	7.5	17.5
#Gibbons Pass	Mont. 7100	1/29	46	12.4	12.0	16.7
Mill Creek Summit	8800	1/31	57	17.0	8.1	17.1
Moose Creek	6200	2/1	32	7.4	9.7	12.6

(b) 1963-77, 15 year period. # Not located directly on this drainage. * Estimated 1963-77, 15 year
Average. (A) Aerial observation. Water content estimated. (SP) Pressure Pillow snow-water equivalent
(K) Radioactive Gage snow-water equivalent

SNOW

DRAINAGE BASIN and or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Elevation				Last Year	Average ^{1/}
Morgan Creek	7580	2/1	34	8.6	6.7	10.3
#Rock Flat Summit	5340	1/29	36	9.4	8.0	13.3
#Secesh Summit	6520	2/1	74	24.2	12.3	26.3*
#Squaw Meadow	5900	2/1	72	25.5	12.2	25.8*
Vienna Mine	8950	1/29	89	29.8	13.8	26.1*

MIDDLE SNAKE RIVER BASIN - NORTHSIDE

LITTLE LOST RIVER

Hilts Creek	8000	1/29	33	8.4	4.2	--
Wet Creek Summit	7760	1/29	29	7.6	4.4	8.7*

BIG LOST RIVER

Bear Canyon	7920	1/29	52	13.3	4.9	13.0*
Copper Basin	7650	1/29	23	6.0	2.5	6.8
Fishpole Lake	9350	1/29	55	17.2	7.1	--
Lost-Wood Divide	7900	1/29	58	16.5	7.0	17.0*
Stickney Mill	7450	1/29	32	7.2	3.8	6.0*

LITTLE WOOD RIVER

#Bear Canyon	7920	1/29	52	13.3	4.9	13.0*
Garfield Ranger Station	6560	1/30	33	8.5	3.1	8.0*
Muldoon	6300	1/30	29	7.1	2.8	6.2*
Swede Peak	7640	1/30	47	13.1	4.8	12.6

BIG WOOD RIVER

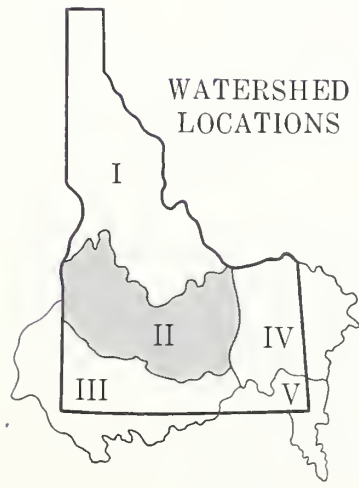
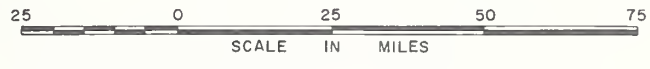
#Couch Summit	6850	1/28	53	15.1	5.4	13.7*
Dollarhide Summit	8400	1/29	61	19.1	8.8	18.3*
Galena	7300	1/28	47	11.9	6.4	14.8
Galena Summit	8780	1/28	57	15.3	7.5	17.5
Graham Ranch	6280	1/28	42	10.1	4.4	10.5
#Lost-Wood Divide	7900	1/29	58	16.5	7.0	17.0*
Mascot Mine	7760	1/29	42	11.5	5.1	9.8*
Mount Baldy	9000	2/1	57	15.6	6.1	15.2*
Soldier Ranger Station	6100	1/28	40	10.8	3.8	9.8
#Vienna Mine	8950	1/29	89	29.8	13.8	26.1*

BOISE RIVER

Atlanta Summit	7500	1/29	78	24.4	11.8	25.2
Bad Bear	5500	1/28	40	11.1	8.3	11.0
#Bogus Basin	6340	2/2	50	15.8	10.0	17.6
Bogus Basin Road	5520	2/2	16	4.3	7.6	6.0

(b)1963-77, 15 year period. #Not located directly on this drainage. ¹ Estimated 1963-77 15 year
Average. (A) Aerial observation. Water content estimated. (SP) Pressure Pillon snow-water equivalent
(R) Radioactive Gage snow-water equivalent

MIDDLE SNAKE RIVER BASIN NORTHSIDE



LEGEND

- Watershed Boundary
- - - - Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⊙ Snow Course and Snow Pressure Pillow
- Snow Pressure Pillow
- † Aerial Snow Depth Gage
- ⬆ Soil Moisture Station
- ⌈ Temperature Gage
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry

INDEX to SNOW COURSES

NO.	STATE	NAME	SEC. LAT.	TWP. OR AND	RGE. LONG.	ELEV.
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MIDDLE SNAKE RIVER BASIN NORTHSIDE

LITTLE LOST RIVER

13E5M	I	Fairview Guard Station	27	12N	26E	6750
13E3	I	Lost-Garfield	3	11N	26E	6600
13E6	I	Moonshine	31	13N	26E	7500
13E4	I	Sawmill Canyon	17	12N	26E	6900
13E7MP	I	Wet Creek Summit	15	8N	25E	7760

BIG LOST RIVER

13F3	I	Bear Canyon	22	5N	21E	7920
13F2A	I	Copper Basin	25	6N	21E	7650
13F3A	I	Fishpole Lake	28	4N	22E	9350
13F11	I	Iron Bog	23	4N	22E	7650
13F12	I	Leadbelt	34	4N	23E	6800
14F3A	I	Lost Wood Divide	25	6N	18E	7900
14F2A	I	Stickney Mill	9	6N	19E	7450
13F1	I	White Knob	25	7N	23E	7700

BIG WOOD RIVER

15F9	I	Camas Creeks Divide	11	2S	9E	5720
14F8	I	Dollarhide Summit	9	3N	15E	8400
14F1M	I	Galena	2	6N	15E	7440
14F12MPS	I	Galena Summit	5	6N	15E	8780
14F5	I	Graham Ranch	10	5N	17E	6280
14F7	I	Mascot Mine	8	4N	20E	7760
14F9	I	Mount Baldy	26	4N	17E	9000
14F11	I	Soldier Ranger Station	19	2N	14E	6100

LITTLE WOOD RIVER

13F4	I	Garfield Ranger Station	11	3N	21E	6560
13F5	I	Muldoon	25	3N	21E	6300
13F9R	I	Swede Peak	4	3N	21E	7640

FISH CREEK

13F10	I	Iron Mine Creek	32	3N	23E	6370
13F6	I	Telfer Ranch	12	2N	22E	6000

NO.	STATE	NAME	SEC. LAT.	TWP. OR AND	RGE. LONG.	ELEV.
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BOISE RIVER

15F4APS	I	Atlanta Summit	23	5N	10E	7500
15F2	I	Bad Bear	35	7N	6E	5500
16F4	I	Bogus Basin Road	32	5N	3E	5520
14F10	I	Couch Summit	9	2N	14E	6850
16F1	I	Deadman Gulch	29	7N	4E	5600
15F14PSR	I	Graham Guard Station	9	7N	10E	5690
15E9AP	I	Jackson Peak	7	8N	9E	7070
15F1MPSR	I	Moore's Creek Summit	19	7N	7E	6100
15F6P	I	Prairie	13	2N	7E	4800
15F3A	I	Road Creek	5	5N	8E	5550
15FAPS	I	Trinity Mountain	6	3N	9E	7780

CANYON CREEK

15F7	I	Bennett Mountain	7	2S	9E	6650
15F12	I	Little Camas Flat	21	1S	9E	4950

PAYETTE RIVER

16F2PS	I	Bogus Basin	16	5N	3E	6340
15E8PSR	I	Cozy Cove	17	11N	7E	5400
15E3	I	Crawford Ranger Station	21	14N	4E	4800
15E10	I	Deadwood Airstrip	8	11N	7E	5440
15E4AS	I	Deadwood Summit	23	14N	7E	6800
16E4	I	High Valley Summit	9	10N	2E	5170
15E1	I	Lake Fork	3	18N	4E	6000
16E1	I	Rock Flat Summit	1	18N	2E	5340
15D1	I	Secesh Summit	4	21N	4E	6520
15D2	I	Squaw Meadow	17	21N	4E	5900
16E3	I	Tripod Summit	17	11N	3E	5200

WEISER RIVER

16D1P	I	Boulder Creek	16	20N	1W	5500
16E2	I	Placer Creek	15 & 16	17N	3W	6000

MANN CREEK

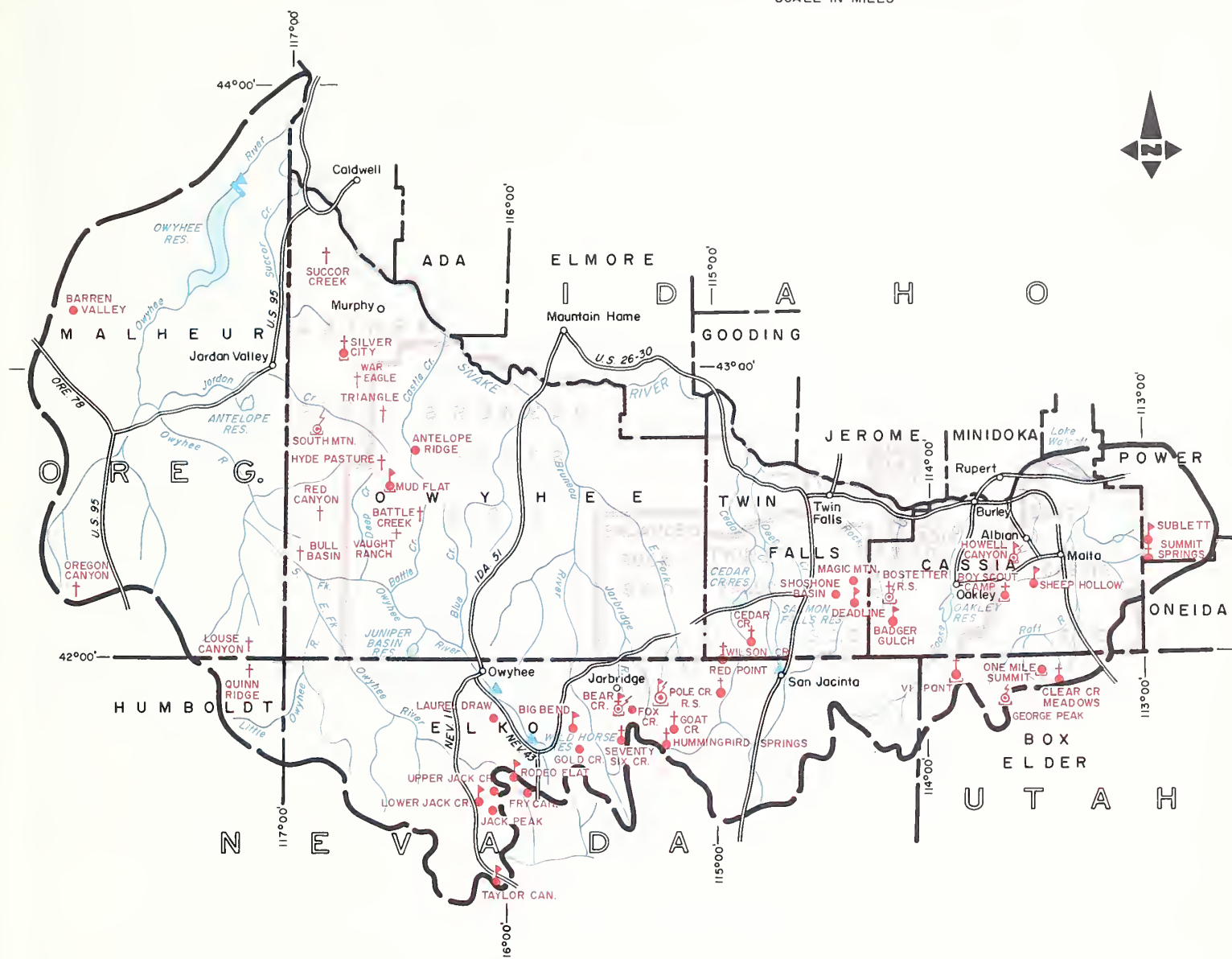
16E9	I	Mann Creek	20	15N	5W	6080
16E8	I	Sturgill Ridge	28	15N	5W	6680
17E1	I	Robinson Creek Ridge	2	14N	6W	6220
17E2	I	Thorson Cabin	12	14N	6W	5320

LEGEND

Numbering System (example)

10J7	SNOW COURSE ONLY.
10J7P	SNOW COURSE AND PRECIPITATION GAGE.
10J7M	SNOW COURSE AND SOIL MOISTURE STATION.
10J7A	SNOW COURSE AND AERIAL MARKER..
10J7s	PRESSURE PILLOW ONLY.
10J7S	SNOW COURSE AND PRESSURE PILLOW.
10J7MA	SNOW COURSE, SOIL MOISTURE STATION AND AERIAL MARKER.
10J7MP	SNOW COURSE, SOIL MOISTURE STATION AND PRECIPITATION GAGE.
10J7m	SOIL MOISTURE STATION ONLY
10J7a	AERIAL MARKER ONLY.
10J7p	STORAGE PRECIPITATION GAGE ONLY.
10J7R	RADIOACTIVE GAGE

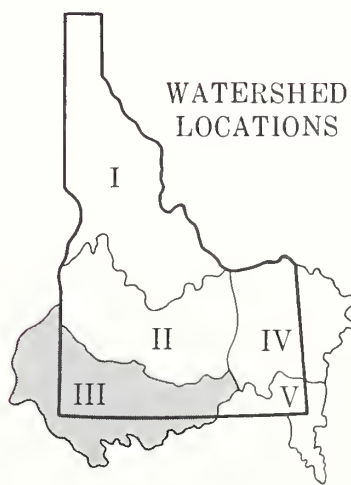
MIDDLE SNAKE RIVER BASIN SOUTHSIDE



LEGEND

- Watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⊙ Snow Course and Snow Pressure Pillow
- Snow Pressure Pillow
- + Aerial Snow Depth Gage
- ⬆ Soil Moisture Station
- T Temperature Gage
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry

WATERSHED LOCATIONS



INDEX to SNOW COURSES

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	OR ANO	LONG.	

MIDDLE SNAKE RIVER BASIN SOUTHSIDE

RAFT RIVER

13G2AP	I	Boy Scout Camp	8	14S	24E	7760
13H2A	U	Clear Creek Meadows	26	14N	14W	9050
13H4SP	U	George Peak	4	13N	14W	9000
13G1MP	I	Howell Canyon	2	13S	24E	8000
13H1P	U	One Mile Summit	19	14N	14W	7330
13G5M	I	Sheep Hollow	4	14S	24E	6200
12G8M	I	Sublett	8	12S	30E	6000
12G9A	I	Summit Springs	15	13S	30E	6400

GOOSE - TRAPPER CREEK

14G3M	I	Badger Gulch	24	15S	19E	6660
14G1AP	I	Bostetter Ranger Station	35	14S	19E	7500
13H3AP	U	Vi Pont	17	14N	17W	7670

SALMON FALLS CREEK

14G5A	I	Cedar Creek	25	15S	13E	7000
14G4M	I	Deadline	25	14S	18E	6900
15H13A	N	Goat Creek	31	46N	60E	8800
14G2	I	Magic Mountain	14	14S	18E	6700
15H18A	N	Red Point	15	47N	61E	7940
14G6	I	Shoshone Basin	24	14S	17E	5740
15G2A	I	Wilson Creek	24	16S	12E	7500

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	OR ANO	LONG.	

BRUNEAU RIVER

15H1MAP	N	Bear Creek	31	46N	58E	7800
15H2	N	Fox Creek	33	46N	58E	6800
15H15A	N	Hummingbird Springs	6	45N	60E	8950
15H14MP	N	Pole Creek Ranger Station	13	46N	59E	8330

OWYHEE RIVER

16G6	I	Antelope Ridge	20	8S	1E	5900
18F5	O	Barren Valley	26	17S	38E	4200
16G9a	I	Battle Creek	10	11S	1E	5700
15H4M	N	Big Bend	30	45N	56E	6700
16G10a	I	Bull Basin	19	12S	5W	5600
15H7	N	Fry Canyon	31	43N	54E	6700
15H5	N	Gold Creek	31	45N	56E	6600
16G5a	I	Hyde Pasture	SE 1/4 31	8S	2W	5800
16H4	N	Jacks Peak	28	42N	53E	8420
16H5	N	Laurel Draw	20	45N	53E	6700
17G4a	O	Louse Canyon	27	40S	44E	6440
16H1M	N	Lower Jack Creek	13	42N	53E	6800
16G7MP	I	Mud Flat	34	9S	2W	5500
17G5a	O	Oregon Canyon	9	40S	40E	6950
17H6a	N	Quinn Ridge	9	47N	41E	6300
16G11ap	I	Red Canyon	32	11S	4W	6650
15H6M	N	Rodeo Flat	36	43N	53E	6800
16F3AP	I	Silver City	6	5S	3W	6400
16G1PSR	I	South Mountain	35	7S	5W	6340
16F6a	I	Succor Creek	25	3S	5W	6100
15H9M	N	Taylor Canyon	35	39N	53E	6200
16G4a	I	Triangle	N 1/2 35	7S	3W	5150
16H2	N	Upper Jack Creek	9	42N	53E	7250
16G12a	I	Vaught Ranch	10	11S	1W	5950
16G13a	I	War Eagle	20	5S	3W	7700

LEGEND

Numbering System (example)

10J7	SNOW COURSE ONLY.
10J7P	SNOW COURSE AND PRECIPITATION GAGE.
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10J7R	RADIOACTIVE GAGE

SNOW

DRAINAGE BASIN and or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Elevation				Last Year	Average /
Couch Summit	6850	1/28	53	15.1	5.4	13.7*
#Dollarhide Summit	8400	1/29	61	19.1	8.8	18.3*
Graham Guard Station	5690	1/29	37	10.9	6.3	--
Jackson Peak	7070	1/29	72	22.4	11.5	24.1*
Moore's Creek Summit	6100	1/28	69	22.8	13.0	23.7
Prairie	4800	1/28	16	4.6	4.6	5.5
#Soldier Ranger Station	6100	1/28	40	10.8	3.8	9.8
Trinity Mountain	7780	1/28	90	30.6	13.8	31.1
#Vienna Mine	8950	1/29	89	29.8	13.8	26.1*

PAYETTE RIVER

Bear Basin	5350	1/29	39	11.5	--	--
#Big Creek Summit	6600	2/2	84	27.4	13.8	26.3
Bogus Basin	6340	2/2	50	15.8	10.0	17.6
#Brundage Mountain	7560	1/29	83	29.5	14.8	32.2*
Cozy Cove	5400	1/29	39	11.6	7.7	13.2*
Crawford Ranger Station	4800	2/2	23	6.5	4.0	6.7
Deadwood Airstrip	5440	1/29	38	11.8	7.4	11.7
Deadwood Summit	7000	1/29	97	32.6	14.4	34.8*
#Jackson Peak	7070	1/29	72	22.4	11.5	24.1*
Lake Fork	6000	2/1	34	9.0	8.9	11.2*
Rock Flat Summit	5340	1/29	36	9.4	8.0	13.3
Secesh Summit	6520	2/1	74	24.2	12.3	26.3*
Squaw Meadow	5900	2/1	72	25.5	12.2	25.8*

WEISER RIVER

Boulder Creek	5500	1/31	39	11.1	9.4	18.0
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MIDDLE SNAKE RIVER BASIN - SOUTHSIDE

RAFT RIVER

Howell Canyon	7980	1/30	60	17.8	13.5	18.6
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SALMON FALLS CREEK

#Bear Creek	Nev.	7800	1/28	47	14.0	9.9	13.6
Deadline		6900	1/27	68	18.0	16.6	15.7
Goat Creek	Nev.	8800	1/31	43	12.3	9.7	11.8
Magic Mountain		6700	1/27	46	14.6	15.1	12.8
#Pole Creek Rgr. Sta.	Nev.	8330	1/31	46	14.0	11.3	14.4

BRUNEAU RIVER

Bear Creek	Nev.	7800	1/28	47	14.0	9.9	13.6
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(b)1963-77, 15 year period. #Not located directly on this drainage. * Estimated 1963-77 15 year average. (A) Aerial observation. Water content estimated. (SP) Pressure Pillow snow-water equivalent. (R) Radioactive Gage snow-water equivalent.

SNOW

DRAINAGE BASIN and or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation					Last Year	Average ^{1/}

Pole Creek Rgr. Sta.	Nev.	8330	1/31	46	14.0	11.7	14.4
#Seventy-six Creek	Nev.	7100	1/28	31	8.8	6.2	7.8

OWYHEE RIVER

#Bear Creek	Nev.	7800	1/28	47	14.0	9.9	13.6
#Seventy-six Creek	Nev.	7100	1/28	31	8.8	6.2	7.8
South Mountain		6340	1/28	34	10.8	10.4	9.9

UPPER SNAKE RIVER BASINCAMAS-BEAVER CREEKS

Camp Creek		6800	1/30	21	4.0	4.4	8.3
Kilgore		6200	1/28	24	6.2	6.8	8.6

HENRYS FORK RIVER

Big Springs		6400	1/28	36	10.3	12.0	14.7
Grassy Lake	Wyo.	7230	1/29	56	16.3	24.9	24.8
Island Park		6290	1/28	34	9.0	10.6	12.0
Sawtell Mountain		8720	1/28	68	22.7	14.7	22.8*
Targhee Pass		7000	1/29	27	6.3	7.2	10.5*
Valley View		6740	1/29	33	8.6	8.2	12.5
White Elephant		7700	1/28	52	16.8	10.3	13.2*

TETON RIVER

Darby Canyon	Wyo.	8250	1/31	49	14.0	14.2	15.4*
Freds Mountain	Wyo.	8150	1/29	48	13.0	13.6	13.9*
Garns Mountain		8300	Not measured			32.5	27.4*
Indian Meadows	Wyo.	8240	1/29	65	20.0	21.6	--
Jackpine Creek	Wyo.	7350	1/29	42	11.3	14.2	14.9*
McRenolds Reservoir		6800	1/29	38	9.9	12.8	13.0*
Phillips Bench	Wyo.	8200	1/30	58	15.8	23.4	17.8*
Pine Creek Pass		6750	1/29	34	8.6	12.3	12.0
State Line		6650	1/29	31	8.8	12.4	10.0
Teton Pass W.S.	Wyo.	8400	1/31	47	12.4	21.8	16.8*

WILLOW CREEK

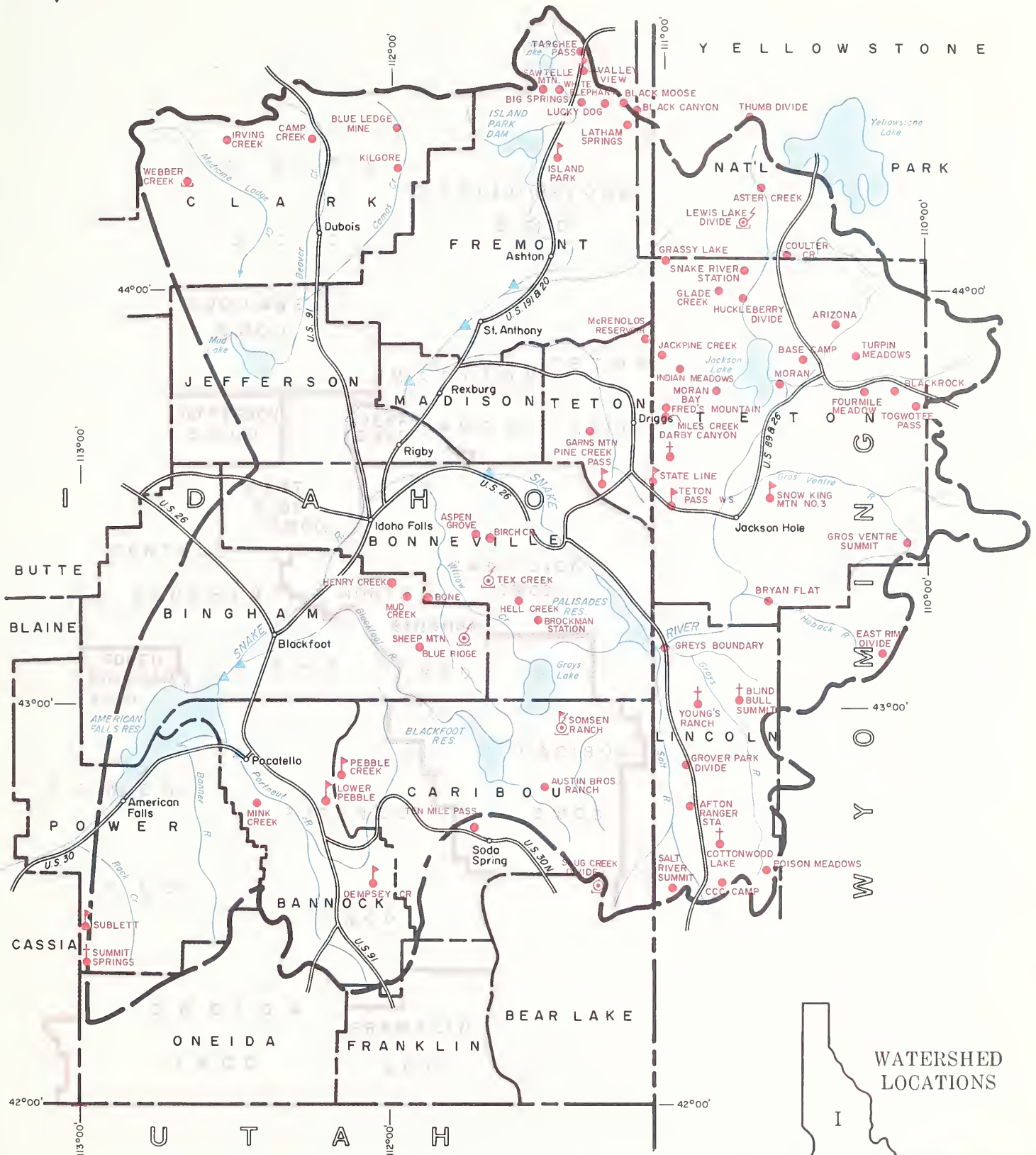
Aspen Grove		6500	2/1	35	11.0	8.2	8.4*
Birch Creek		6800	2/1	28	6.8	7.5	7.4*
Blue Ridge		6800	2/4	42	12.8	10.4	--
Bone		6200	2/4	21	5.1	5.7	6.0*
Brockman Station		6430	2/4	27	7.2	8.2	--
Hell Creek		7100	2/4	36	9.3	10.6	--

(b) 1963-77, 15 year period. # Not located directly on this drainage. * Estimated 1963-77 15 year Average. (A) Aerial observation. Water content estimated. (SP) Pressure Pillon snow-water equivalent. (R) Radioactive Gage snow-water equivalent

UPPER SNAKE RIVER BASIN



25 0 25 50
SCALE IN MILES

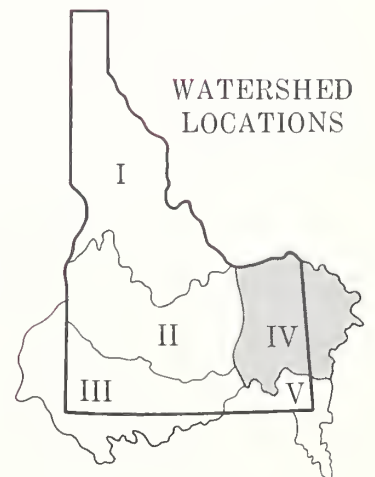


LEGEND

- Watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point

- Snow Course
- ⊙ Snow Course and Snow Pressure Pillow
- Snow Pressure Pillow
- † Aerial Snow Depth Gage
- ▶ Soil Moisture Station
- ¶ Temperature Gage
- ⊥ Precipitation Gage
- ⚡ Radio Telemetry

WATERSHED LOCATIONS



INDEX to SNOW COURSES

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	OR AND	LONG.	

UPPER SNAKE RIVER BASIN

SNAKE RIVER - WYOMING

10G4	Wy	Afton Ranger Station	30	32N	118W	6200
10F1	Wy	Arizona	3	46N	115W	6850
10E8	Wy	Aster Creek	44° 17'	110° 38'		7700
10F2	Wy	Base Camp	20	46N	113W	6900
10F7	Wy	Blackrock	4	44N	111W	8600
10G2A	Wy	Blind Bull	6	34N	115W	8750
10F14	Wy	Bryan Flat	9	38N	115W	6250
10G7	Wy	CCC Camp	9	29N	118W	7500
10G5A	Wy	Cottonwood Lake	25	31N	118W	7500
10E10	Wy	Coulter Creek	44° 09'	110° 33'		7600
10F17MP	Wy	East Rim Divide #2	32	37N	111W	7950
10F6	Wy	Four Mile Meadows	35	45N	112W	7770
10E13	Wy	Glade Creek	12	48N	116W	7200
10F18	Wy	Greys Boundary	33	37N	118W	5800
10F19	Wy	Gros Ventre Summit	36	40N	111W	8750
10G3	Wy	Grover Park Divide	27	33N	118W	7500
10E14	Wy	Huckleberry Divide	32	48N	115W	7300
10E9PS	Wy	Lewis Lake Divide	44° 13'	110° 40'		7900
10F4MP	Wy	Moran	8 & 17	45N	114W	6800
10F3	Wy	Moran Bay	14	45N	116W	6800
10G6	Wy	Poison Meadows	29	30N	116W	8500
10G8P	Wy	Salt River Summit	32	29N	118W	7900
10E12MP	Wy	Snake River Station	9	48N	115W	6780
10F20M	Wy	Snow King Mountain #3	4	40N	117W	7600
10E7	Wy	Thumb Divide	44° 22'	110° 35'		7900
10F9MP	Wy	Togwotee Pass	29	44N	110W	9600
10F5	Wy	Turpin Meadows	14	45N	112W	6930
10G1A	Wy	Young's Ranch	26	34N	116W	6530

HENRYS FORK RIVER

11E9	I	Big Springs	4	13N	44E	6400
11E18	I	Black Canyon	11	13N	45E	7850
11E19	I	Black Moose	33	14N	45E	8125
10E15	Wy	Grassy Lake	6	48N	117W	7230
11E10M	I	Island Park	28	13N	43E	6290
11E16	I	Latham Springs	9	13N	45E	7650
11E14	I	Lucky Dog	2	13N	45E	6900
11E32	I	Sawtell Mountain	7	14N	43E	8720
11E34	I	Targhee Pass	32	16N	44E	7000
11E3M	I	Valley View	7	15N	44E	6740
11E36	I	White Elephant	17	14N	43E	7700

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	OR AND	LONG.	

TETON RIVER

10F21	Wy	Darby Canyon	28	43N	118W	8250
10F22	Wy	Freds Mountain	12	44N	118W	8150
11F13	I	Garns Mountain	20	4N	44E	8300
10F25	Wy	Indian Meadows	31	46N	117W	8240
10F26	Wy	Jackpine Creek	15	46N	118W	7350
11F12	I	McRenolds Reservoir	5	7N	46E	6800
10F27	Wy	Miles Creek	13	44N	118W	7300
11F2M	I	Pine Creek Pass	24	3N	44E	6750
11F1M	I	State Line	32	3N	46E	6650
10F13	Wy	Teton Pass W. S.	24	41N	118W	8400

CAMAS - BEAVER CREEK

11E11	I	Blue Ledge Mine	27	13N	38E	6700
12E3	I	Camp Creek	21	13N	36E	6800
11E12	I	Kilgore	6	12N	39E	6200

MEDICINE LODGE CREEK

12E4	I	Irving Creek	20	13N	33E	7035
12E5	I	Webber Creek	23	12N	32E	6700

WILLOW CREEK

11F10	I	Aspen Grove	36	2N	41E	6500
11F3	I	Birch Creek	36	2N	41E	6800
11F17I	I	Blue Ridge	35	2S	39E	6800
11F8	I	Bone	29	1S	40E	6250
11F16	I	Brockman Station	19	2S	43E	6430
11F15	I	Hell Creek	27	1S	42E	7100
11F14	I	Mud Creek	3	2S	39E	7150
11F11R	I	Sheep Mountain	30	2S	41E	6570
11F5R	I	Tex Creek	36	1N	42E	6650

SAND CREEK

11F6	I	Henry Creek	7	1S	39E	5650
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BLACKFOOT RIVER

11G3	I	Austin Brothers Ranch	28	7S	43E	6400
11G5PS	I	Slug Creek Divide	15	10S	44E	7225
11G1MS	I	Somsen Ranch	25	5S	43E	7000
11G29	I	Ten Mile Pass	8	8S	41E	6250

PORTNEUF RIVER

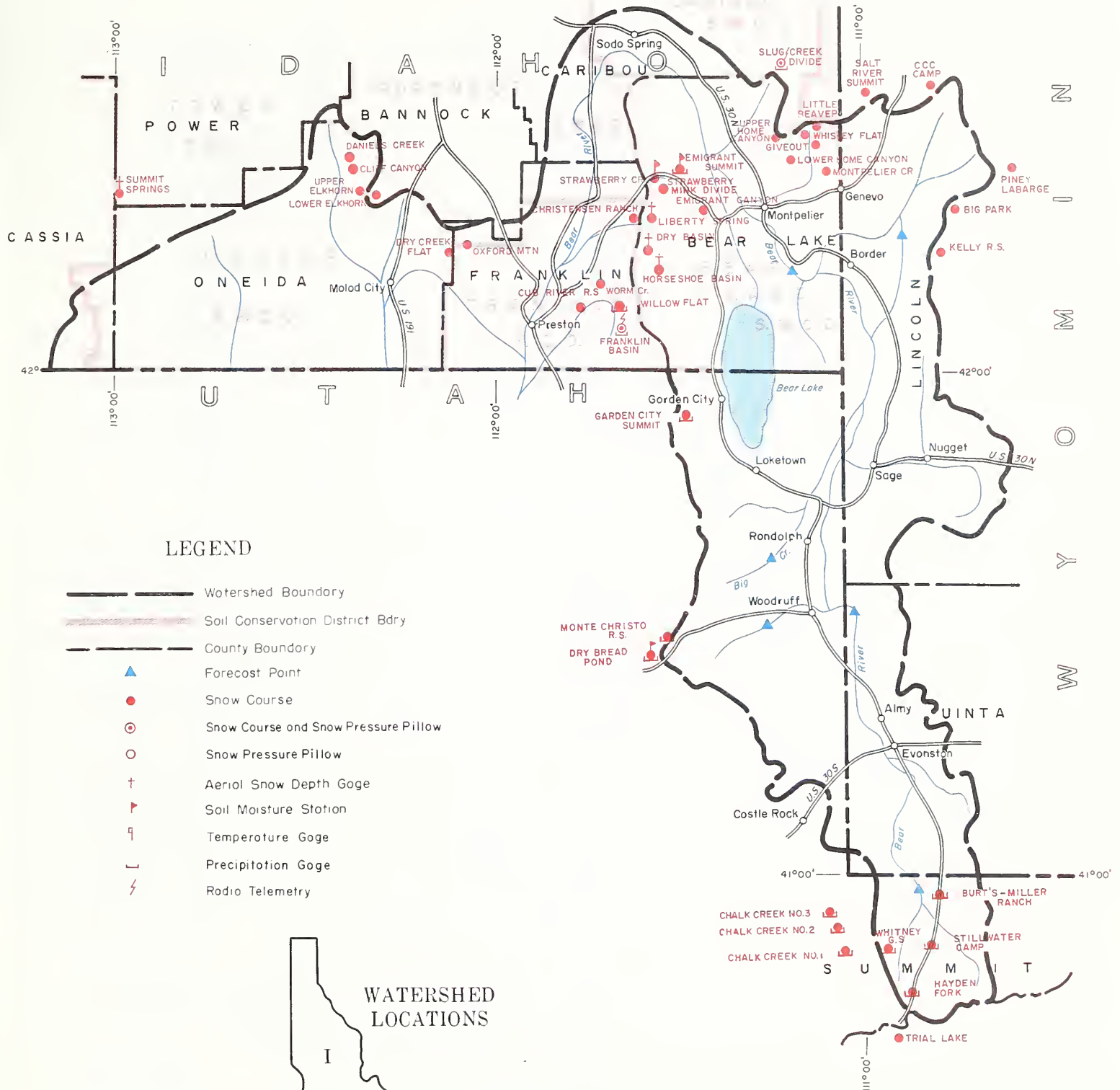
12G5	I	Dempsey Creek	18	10S	38E	6100
12G6M	I	Lower Pebble	7	8S	38E	5800
12G1	I	Mink Creek	33	7S	34E	6300
12G2M	I	Pebble Creek	34	7S	37E	6550

LEGEND

Numbering System (example)

10J7	SNOW COURSE ONLY.
10J7P	SNOW COURSE AND PRECIPITATION GAGE.
10J7M	SNOW COURSE AND SOIL MOISTURE STATION.
10J7A	SNOW COURSE AND AERIAL MARKER.
10J7s	PRESSURE PILLOW ONLY.
10J7S	SNOW COURSE AND PRESSURE PILLOW.
10J7MA	SNOW COURSE, SOIL MOISTURE STATION AND AERIAL MARKER.
10J7MP	SNOW COURSE, SOIL MOISTURE STATION AND PRECIPITATION GAGE.
10J7m	SOIL MOISTURE STATION ONLY.
10J7a	AERIAL MARKER ONLY.
10J7p	STORAGE PRECIPITATION GAGE ONLY.
10J7R	RADIOACTIVE GAGE

GREAT BASIN



INDEX to SNOW COURSES

NO.	STATE	NAME	SEC.	TWP.	RGE.	ELEV.
			LAT.	OR AND	LONG.	

GREAT BASIN

BEAR RIVER

10G11	Wy	Big Park	7	27N	117W	8700
11H13MP	U	Dry Bread Pond	19	8N	4E	8230
11G7	I	Emigration Canyon (mouth)	24	12S	42E	6500
11H7P	U	Garden City Summit	35	14N	4E	7600
10J6P	U	Burt's-Miller Ranch	19	3N	10E	7900
10J7P	U	Hayden Fork	1	1S	9E	9300
10G12	Wy	Kelly Ranger Station	13	26N	118W	8200
11H12P	U	Monte Cristo R. S.	3	8N	4E	8960
10G10	Wy	Piney LaBarge	19	29N	114W	8820
10J17P	U	Stillwater Camp	32	2N	10E	8550
10J28P	U	Whitney G. S.	4	1N	9E	9300

MONTPELIER CREEK

11G16	I	Giveout	2	12S	45E	6840
11G20	I	Little Beaver	26	11S	45E	6970
11G27	I	Lower Home Canyon	17	12S	45E	7500
11G18	I	Montpelier Creek	22	12S	45E	6570
11G26	I	Upper Home Canyon	31	11S	45E	8500
11G21	I	Whiskey Flat	26	11S	45E	6985

MINK CREEK

11G11	I	Christensen Ranch	27	13S	41E	5600
11G14A	I	Dry Basin	30	13S	42E	7900
11G6MP	I	Emigrant Summit	21	12S	42E	7350
11G15A	I	Horseshoe Basin	31	13S	42E	8000
11G13A	I	Liberty Spring	7	13S	42E	8600
11G9M	I	Strawberry Creek	9	13S	41E	5800
11G10	I	Strawberry Mink Divide	14	13S	41E	6800

CUB RIVER

11G12	I	Cub River Ranger Station	5	15S	41E	5400
11G8S	I	Franklin Basin	1	16S	41E	8000
11G4P	I	Willow Flat	2	15S	41E	6100
11G28	I	Worm Creek	28	14S	41E	6660

MALAD RIVER

12G13	I	Cliff Canyon	13	12S	35E	7200
12G12	I	Daniels Creek	11	12S	35E	6400
12G4	I	Dry Creek Flat	28	13S	37E	6480
12G11	I	Lower Elkhorn	30	12S	36E	7000
12G3	I	Oxford Mountain	27	13S	37E	6800
12G10	I	Upper Elkhorn	25	12S	35E	7100

LEGEND

Numbering System (example)

10J7	SNOW COURSE ONLY.
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10J7p	STORAGE PRECIPITATION GAGE ONLY.
10J7R	RADIOACTIVE GAGE

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average /

Mud Creek	7150	2/4	47	13.7	9.3	--
Sheep Mountain	6570	2/4	32	8.7	8.3	9.8*
Tex Creek	6650	1/31	31	7.7	6.8	6.5*

BLACKFOOT RIVER

Austin Brothers Ranch	6400	1/30	25	8.6	8.3	6.4
Slug Creek Divide	7230	1/30	47	13.2	11.0	11.5
Somsen Ranch	7000	1/30	41	11.0	12.5	10.1

PORTNEUF RIVER

Dempsey Creek	6100	2/1	36	10.2	8.8	8.3
Lower Pebble	5800	2/3	40	11.2	10.2	9.2*
Mink Creek	6300	2/2	42	12.3	10.2	12.4*
Pebble Creek	6550	2/3	44	14.5	11.2	11.2

GREAT BASINBEAR RIVER

Emigrant Summit	7380	1/30	65	16.6	17.8	17.0
Emigration Canyon	6500	1/30	36	9.2	--	7.5

MONTPELIER CREEK

Giveout	6840	1/31	38	9.6	9.0	8.5
Little Beaver	6970	1/31	39	10.7	11.2	10.6
Lower Home Canyon	7640	2/1	42	10.9	9.8	10.1*
Montpelier Creek	6570	1/31	26	6.6	5.8	5.8
Upper Home Canyon	8560	2/1	60	17.7	14.2	16.3*
Whiskey Flat	6960	1/31	30	7.9	6.6	6.5

MINK CREEK

#Emigrant Summit	7380	1/30	65	16.6	17.8	17.0
Strawberry Creek	5800	1/30	27	6.7	--	7.4

CUB RIVER

Cub River Ranger Station	5400	2/3	22	6.2	8.6	6.4
#Franklin Basin	8000	2/3	50	18.1	18.1	17.8*
Willow Flat	6100	2/3	36	11.6	14.8	10.9

(b) 1963-77, 15 year period. # Not located directly on this drainage. * Estimated 1963-77 15 year Average. (V) Aerial observation. Water content estimated. (SP) Pressure Pillon snow-water equivalent. (R) Radioactive Gage snow-water equivalent.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average ⁶

ADDITIONAL MEASUREMENTS RECEIVED LATEWEBB CREEK

Kruse Meadows	4800	2/1	23	6.2	9.1	--
Soldier Meadow	4640	2/1	23	5.6	9.2	--
Webb Creek	4720	2/1	25	6.2	9.1	--

Agencies and Organizations Cooperating in Idaho Snow Surveys

GOVERNMENT AGENCIES

States:

Idaho Department of Water Resources
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Montana Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon Cooperative Snow Surveys
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U.S. Army Engineers

U.S. Department of Agriculture
Forest Service
Agricultural Research Service
Statistical Reporting Service

U.S. Department of Commerce
NOAA, National Weather Service

U.S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Water Resources Division, Geological Survey
National Park Service
Bureau of Land Management

PUBLIC UTILITIES

The Montana Power Company
Washington Water Power Company
Idaho Power Company
Utah Power and Light Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Blaine Soil Conservation District
Boise Project Board of Control
Idaho Water District #01
Little Wood River Irrigation District
Mann Creek Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control
Valley Soil Conservation District
Portneuf Soil and Water Conservation District
East Cassia Soil and Water Conservation District
West Cassia Soil and Water Conservation District
Camas Soil and Water Conservation District

*Other organizations and individuals furnish valuable information for
snow survey reports. Their cooperation is gratefully acknowledged.*

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